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REMARKS

Reconsideration of the application in view of the above amendments and the following remarks is requested. Claims 15, 19, and 38-72 are in this application. Claims 58 and 63 have been amended to be in independent form. Claims 40-44 and 67-68 have been allowed. Claims 40-44 and 67-68 have been allowed. Claims 1-14, 16-18, and 20-37 have been cancelled.

Applicant notes that an amendment was filed under 37 CFR §1.116 on September 23, 2003 via facsimile transmission with a certificate of facsimile transmission. Applicant's attorney does not know, and has been unable to determine, whether the September 23, 2003 amendment has been entered. As a result, applicant's attorney does not know the current status of the claims. However, from what applicant's attorney and the attorney's assistant can determine, the PTO has no record of the September 23, 2003 amendment. Thus, applicant's attorney assumes that the September 23, 2003 amendment has not and will not be entered. As a result, the status of the claims reflects how the claims have been changed from the amendment filed on March 17, 2003 (which was followed by the Final Rejection that was mailed on May 29, 2003).

In preparing the September 23, 2003 amendment, applicant determined that claim 32 had not previously been expressly cancelled (although applicant and the Examiner continued prosecution as though claim 32 had been cancelled). As a result, claim 32 is expressly cancelled in the present amendment. Applicant notes that this inadvertent error led to a miscount of the total number of claims that were pending. Applicant further notes that the total number of pending claims was also inadvertently miscounted in the amendment filed on May 7, 2002.

Further, in the amendment filed on March 17, 2003, applicant paid for seven independent claims. In an amendment after final filed on July 29, 2003, applicant paid for two additional independent claims for a total of nine independent claims. Although the amendment filed on July 29, 2003 was not entered, it is applicant's understanding that

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applicant has paid for nine independent claims. As a result, the fee transmittal sheet reflects that applicant has paid for nine independent claims. If applicant's understanding is incorrect, applicant has authorized the PTO to charge any insufficiencies in fees to the attorney's deposit account.

The Examiner rejected claims 15, 19, 38-39, 45-57, 60-62, 65-66, and 69-72 under 35 U.S.C. §103(a) as being unpatentable over Gens et al. (U.S. Patent No. 5,515,225) considered alone, or in view of the Admitted Prior Art (APA). For the reasons set forth below, applicant respectfully traverses this rejection.

Claim 15 recites, in part,

“a plurality of pads; [and]

“a plurality of ESD positive lines, the plurality of positive lines not being electrically connected to each other, none of the positive lines being directly connected to a pad. [Brackets added.]

Claims 51 and 57 recite similar limitations.

In rejecting the claims, the Examiner pointed to pads P1 and P2 shown in FIG. 3 of Gens as constituting the plurality of pads. In addition, the Examiner pointed to the horizontal lines, which are connected to the right side of the high power supply terminals labeled VDD1 and VDD2 (and the vertical extensions connected to the horizontal lines and the diodes) as constituting the plurality of positive lines in Gen's structure.

Applicant notes, however, that the Gens reference expressly teaches that the boxes P1, P2, VDD1, VDD2, VSS1, and VSS2 are pads. (Boxes P1 and P2 are I/O pads, boxes VDD1 and VDD2 are power supply pads, and boxes VSS1 and VSS2 are ground pads.) In addition, FIG. 3 of Gens shows that the horizontal lines are directly connected to boxes VDD1 and VDD2. Since the horizontal lines shown in FIG. 3 of Gens are directly connected to pads VDD1 and VDD2, it is not possible for the horizontal lines to be read to be the positive lines required by claims 15, 57, and 62.

In responding to applicant's arguments, the Examiner stated that applicant's FIG. 16 depicts power supply lines 1640-1647, ground line 1610, and I/O pads 1620 connected

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between two diodes. The Examiner continued by stating that no pads are connected to the power supply lines and the ground lines. The Examiner further stated that the specification does not recite VCC pads and ground pads. The Examiner then concluded that the plurality of pads 1620 in FIG. 16 can only be the I/O pads which are located in between the two diodes.

Applicant is respectfully unclear as to the argument that the Examiner has set forth, but believes the Examiner is arguing that FIG. 16 teaches a plurality of pads 1620, the plurality of pads 1620 can only be the I/O pads which are located in between two diodes and, as a result, the claim term "pads" must be read to mean "pads that only carry varying voltages."

Thus, the issue presented is whether the Examiner correctly interpreted the meaning of the claim term "pads." To determine the meaning of a claim term, the PTO must review the entire patent disclosure. Rowe v. Dror, 112 F.3d 473, (Fed. Cir. 1997). Thus, the Examiner must consider applicant's entire disclosure, including FIGs. 1-16, when interpreting a claim term. As a result, the Examiner erred by limiting the Examiner's review to only FIG. 16 and the associated text of applicant's specification.

In the present situation, applicant's specification makes numerous references to I/O pads, VCC pads, and ground pads. For example, applicant's FIG. 4 shows an I/O pad, a dirty ground pad, a substrate ground pad, a clean ground pad, and an analog ground pad, while applicant's FIG. 6 shows an I/O pad, a dirty VCC pad, a clean VCC pad, and an analog VCC pad, and applicant's FIG. 7 shows a shared VCC pad. Thus, applicant's disclosure refers to I/O pads, VCC pads, and ground pads.

After the entire disclosure has been reviewed, the PTO must give the claims their broadest reasonable interpretation in light of the specification. In re Zletz, 893 F.2d 319, (Fed. Cir. 1989). Thus, since applicant's specification refers to I/O pads, VCC pads, and ground pads, the broadest reasonable interpretation of the claim term "pads" must include I/O pads, power pads, and ground pads. Power pads and ground pads, in turn, carry steady voltages, VCC and ground, respectively.

Therefore, as required by Zletz, the claim term “pads” can not be given an interpretation that is narrower and, as a result, can not be interpreted to mean “pads that only carry varying voltages.” Thus, when the claim term “pads” is applied to the Gens reference, the claim term “pads” includes structures that carry varying voltages and structures that carry steady voltages. As a result, the horizontal lines shown in FIG. 3 of Gens can not be read to be the positive lines of the claims because these lines are connected to pads that carry steady voltages, the VCC1 and VCC2 pads. Thus, claims 15, 19, 38-39, 45-50, 57, 60-61, and 69-70 are patentable over Gens, and Gens in view of the Admitted Prior Art (APA).

With respect to claim 45, in the amendment filed on March 17, 2003, applicant argued that this claim recites that the ESD positive lines are never connected to a steady voltage source. However, as shown in FIGs. 2 and 3 of Gens, the positive (horizontal) lines are connected to the VDD1 and VDD2 pads. As a result, whenever power is applied to the device, the positive (horizontal) lines are connected to a steady voltage source. Thus, claim 45 is patentable over Gens, and Gens in view of the APA for this additional reason as well. From what applicant can determine, the Examiner has not addressed applicant’s arguments with respect to claim 45.

With respect to independent claim 51, this claim recites, in part,

“a plurality of ESD switches connected to the ESD positive lines and the ESD negative ring . . . a switch of the plurality of ESD switches passing a current from a positive line to the negative ring when a voltage on the positive line rises at a first rate.”

Claim 62 recites similar limitations.

In rejecting the claims, the Examiner argued that the APA teaches in FIGs. 1 and 2 and the related text a plurality of ESD switches (including a transistor in FIG. 2) connected to the positive line and to the negative ring. As noted above, the Examiner pointed to the horizontal lines connected to the VDD1 and VDD2 pads shown in FIG. 3 of Gens as constituting the ESD positive lines, and bus R2 shown in FIG. 3 of Gens as constituting the negative line required by the claims.

Thus, the Examiner appears to argue that it would be obvious to replace a lower diode (e.g., the diode D2 that is connected to pad VDD1 shown in FIG. 2 of Gens) with a switch or a transistor. The Examiner, however, has not set forth any reason that would motivate one skilled in the art to replace a lower diode with a switch or a transistor. As a result, the Examiner has failed to set forth a prima facie case of obviousness. As a result, claims 51 and 62 are patentable over Gens, and Gens in view of the Admitted Prior Art (APA). In addition, since claims 52-56 and 71, and 65-66 and 72 directly or indirectly depend from claims 51 and 62, respectively, claims 52-56, 65-66, and 71-72 are patentable over Gens for the same reasons as claims 51 and 62.

With respect to claims 69-72, applicant notes that if a diode D1 is read to be directly connected to a positive line, the diode D1 can not be read to be directly connected to a pad because the positive line lies between the diode D1 and the pad. As a result, claims 69-72 are patentable for these further reasons.

The Examiner objected to claims 58-59 and 63-64, but indicated that these claims would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Claims 58 and 63 have been amended to be in independent form, and are believed to include all of the limitations of the base claim. Claims 59 and 64 have not been amended as these claims depend from claims 58 and 63, respectively.

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Thus, for the foregoing reasons, it is submitted that all of the claims are in a condition for allowance. Therefore, the Examiner's early re-examination and reconsideration are respectively requested.

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